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RESPONSE UNDER 37 C.F.R. § 1.116
EXPEDITED PROCEDURE
GROUP 3721
PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q78494

Kaoru IRIE, *et al.*

Appln. No.: 10/736,076

Group Art Unit: 3721

Confirmation No.: 4257

Examiner: Eugene Lee KIM

Filed: December 16, 2003

For: PROCESS FOR PRODUCING SPIRAL MEMBRANE ELEMENT

RESPONSE UNDER 37 C.F.R. § 1.116

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Please consider the remarks below in response to the final Action mailed March 3, 2005.

Claims 1-2 are all the claims pending in the application.

Referring to the Office Action Summary page, the claim to foreign priority and receipt of the foreign priority document has not been acknowledged, as was requested in the Amendment filed January 27, 2005. The priority document (JP 2002-374827) was submitted with the application on December 16, 2003. **Applicants kindly request acknowledgment in the next communication from the Examiner.**

The final Office Action contains a single rejection. Specifically, at Section No. 1 (page 2), Claims 1 and 2 are rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,681,467 ("US '467").

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In the Amendment filed January 27, 2005, Applicants argued that US '467 does not disclose *the combination* of (i) forming beforehand in a membrane a folding initiation part reduced in bending resistance along each of folding lines for the membrane, and folding the membrane at the folding initiation parts, and (ii) heating and pressing the membrane during and/or after the folding.

At Section No. 2 of the final Office Action, the Examiner indicates that she was not persuaded by Applicants' argument. The Examiner states at Section No. 2 that she has interpreted "the heating means that form the creases in Solie et al to read on the limitation of 'forming beforehand ... reduced in bending resistance.'" Referring to the embodiment in FIG. 6 of US '467, the Examiner states:

[t]he reduced resistance is formed with element 247 and the membrane is reduced in angle to form a fold with a predetermined angle value which subsequently gets pressed in element 250. This reads on the claimed subject matter.

Applicants respectfully disagree with the Examiner's position and request reconsideration and withdrawal of the §102/§103 rejection for the following reasons.

During patent examination, the words of a claim are given their plain meaning unless applicant has provided a clear definition in the specification. According to the plain meaning of the term "beforehand" in the limitation in Claim 1 of "forming *beforehand* in a membrane a folding initiation part reduced in bending resistance along each of folding lines for the membrane, *folding* the membrane at the folding initiation parts, and heating and pressing the membrane during and/or after the folding," the "folding initiation part" is formed *prior to* any folding of the membrane.

The foregoing interpretation is absolutely consistent with the specification, such that the specification does not contain any contrary definition which may lead to an interpretation that the "folding initiation part" may be formed after folding of the membrane begins. For example, Applicants refer to FIGS. 3(a) and (b) and the description at page 10, line 16, through page 11,

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line 8. Thus, the present claims exclude a process where folding of the membrane has begun prior to the formation of the “folding initiation part.”

When the present claims are properly interpreted, they exclude the disclosure of US ‘467 being relied upon by the Examiner. In particular, in each of the embodiments of US ‘467, including the embodiment shown in FIG. 6 relied upon by the Examiner, the softening means 247 is applied to the membrane *after* folding of the membrane has begun. For example, referring to column 7, lines 39-45, and FIG. 6 of US ‘467, it is disclosed that:

a loop 239 is formed in a membrane sheet 226 by inserting the front edge 231 and back edge 233 of the membrane sheet into a space 235 defined by at least two constricting structures 237', 237", FIG. 6(a). The loop diameter is reduced to until just before the angle of curvature of the membrane sheet 202 equals the critical angle of curvature.

Only thereafter is the softening means 247 applied to the membrane, as disclosed at column 7, lines 59-61.

Applicants direct the Examiner’s attention to (i) the insertion of the front edge 231 and back edge 233 of the membrane sheet into a space 235 defined by at least two constricting structures 237', 237" and (ii) the reduction of the loop diameter to a point just before the critical angle of curvature. Each of (i) and (ii) is a part of the process for folding the membrane, such that the process of folding the membrane in US ‘467 begins prior to the application of softening means 247. For example, although in (ii) the loop diameter is not reduced all the way to the critical angle of curvature, the loop diameter in (ii) *is* in the process of being reduced, which clearly indicates that the process of folding has begun. Pressing with element 250 only completes the folding; the folding in US ‘467 has already begun prior to the application of element 250. Thus, the claimed process is distinguished from US ‘467 because the claimed process requires the “folding initiation part” to be formed *prior to* any folding of the membrane.

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Furthermore, US '467 teaches away from the claimed invention. US '467 teaches that application of its softening means 247 should cease when the membrane is "without a constriction to define the shape." Column 5, lines 59-62. Thus, according to the teaching of US '467 at column 5, lines 59-62, application of softening means 247 to the membrane should only occur while the shape of the membrane is being constricted, as is the case when the folding process has already begun, as shown in any of the embodiments of US '467, including the embodiment of FIG. 6. The teaching at column 5, lines 59-62, therefore leads away from application of the softening means 247 to a membrane *prior to* any folding of the membrane, such as the case, for example, in FIG. 3(a) of the present application, wherein the shape of the membrane is also not constricted.

For the foregoing reasons, Applicants respectfully request reconsideration and withdrawal of the §102/§103 rejection based on US '467.

Reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

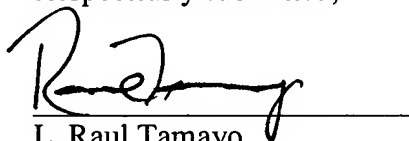
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WASHINGTON OFFICE

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